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Adjectival Nuclear Junctures in Persian: A Role & Reference Grammar Analysis

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Abstract
The issue of predication is the central theme of all linguistic theories i.e. all the languages of the world have predicating elements through which communication and related propositions form. What these languages differ in is the way different elements or classes of words are used to predicate a sentence or a clause. Verbs are the most frequent and widely known predicating elements and as a matter of fact, and as Napoli (1989) maintains, developments in modern linguistics have recently allowed questions regarding the deeper levels of the nature of predication. Issues such as the status of multiple and complex predicates (CP) or nuclear junctures (NJ) in a single clause are of much interest in linguistic theories dealing with predication since in these constructions nouns, adverbs, or adjectives can also play a predicating role in combination with the verbal elements which are sometimes referred to as ‘light verbs’.

1. Adjectival Light Verb Constructions in Persian

In general, CPs or NJs have been analysed crosslinguistically from different perspectives and are of great theoretical importance because their analysis raises important points about inter-relationship of morphology, syntax, and lexicon. Cattell (1984) who is one of the first scholars that characterizes these constructions in English, discusses structures such as the complex predicate ‘make an offer’ compared with the full/heavy verb/predicate ‘offer’. In constructions like ‘make an offer’ the verbal element ‘make’ is not the only predicating element rather the combination of ‘make’ and ‘an offer’ forms a CP in which the verb ‘make’ is in fact a light verb i.e. it has a light predication role. As referred before, these light verbal elements can also join adjectives to form NJs, which are called ‘adjectival light verbal constructions’ and are the main focus of the present study. Indeed, the aim here is to investigate these structures in Modern Persian as one of the Indo-European languages, with one of the oldest written traditions in this family, of more than 2500 years\(^1\) The theoretical framework adopted is Role and Reference Grammar which is believed to be capable of capturing the double nature of Persian complex predicates in general and light verb constructions in particular. According to Payne (1997), ‘if a language has a morphosyntactically distinct class of adjectives, this group of words is typically used to express the following properties’:

As indicated by Thompson (1988) in his empirical study, there is typically a distinction between the predicating function of adjectives and their function of introducing new referents. Payne (1997) views the former function of adjectives as the prototypical function of verbs as predicators and the latter as the prototypical function of nouns as words that refer to entities. Napoli (1989) highlights the same distinction: claiming that adjectives can play two types of roles in the context they appear; they can act as a modifier or predicator.

Referring to Williams’s (1980) ideas about the possibility of multiple predicates, Napoli (1989) maintains that multiple predicates are possible in a single clause. Following this line of approach, this study claims that adjectives in Persian function with regard to two crucial parameters: modification and predication. In Persian, the former role of adjectives is achieved when nouns follow them with an intervening *Ezafê* (as ‘of’ in English) as in (1) below i.e. adjectives in Persian follow the nouns they are modifying. The latter predicating role is fulfilled when adjectives are followed by verbs and complete the meaning of the verb and, as a matter of fact, and as mentioned above, form an adjectival NJ. In Persian, the verbs which accompany and co-occur with adjectives (in predicative role) are the copula *buden* ‘be’ as in (2), the causative light verb *kærđen* ‘to make’ as in (3), and the inchoative light verb *šodæn* ‘become’ as in (4) below. Of these the copula *buden* ‘be’ is the only verb whose combination with the predicative adjective in Persian is not capable of forming a NJ. Thus we claim that adjectival CPs (in Persian) are formed with the combination of an adjective with the light verbs *šodæn* ‘become’ and *kærđen* ‘make’ as shown later in this study.

<table>
<thead>
<tr>
<th>AGE (young, old, etc.)</th>
<th>DIMENSION (big, little, tall, short, long, etc.)</th>
<th>VALUE (good, bad)</th>
<th>COLOR (black, white, red, etc.)</th>
<th>PHYSICAL CHARACTERISTICS (hard, heavy, smooth, etc.)</th>
<th>SHAPE (round, square, etc.)</th>
<th>HUMAN PROPERTY (jealous, happy, clever, wary, etc.)</th>
<th>SPEED (fast, slow, quick, etc.)</th>
</tr>
</thead>
</table>

(1) pesær-e šad  
boy-Ez (of) glad  
‘the glad boy’

(2) Ali šad bud  
Ali glad be-Past.3rd.Sg.  
‘Ali was glad.’

(3) Ali šad šod  
Ali glad become-Past.3rd.Sg.  
‘Ali became glad.’

(4) Ali dust-æš-ra šad kærđ.  
Ali friend-his-DOM glad become-Past.3rd.Sg.  
‘Ali made his friend glad.’

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2 Except superlative adjectives which precede nouns and in some literary styles where attributive adjectives may precede nouns as in šad peserî didæm ‘Happy boy I saw’.
In (1) above, the (human property) adjective šad ‘glad’ follows and modifies the noun pesær ‘boy’. The intervening morpheme ‘e’ represent the ezafe ‘of’ construction which conjoins the noun pesær ‘boy’ to its adjective šad ‘glad’. Therefore, the adjective in (1) is the modifier of the noun and has no predicating role. In (2), (3), and (4), however, the predicating role of the adjective is fulfilled in different degrees. In (2), the adjective šad ‘glad’ is followed by the copula bud ‘was’ which is the inflected form of the verb budæn ‘be’ and is semantically empty, indicating that the whole semantic predicating role is carried by the adjective in the sentence.

Following Emonds (1985) and Napoli (1989), this study claims that in adjective/copula constructions (as in (2) above) the adjective and not the adjective + copula combination is the predicate of the sentence since the copula is a grammatical word and, unlike the semantically full lexical items, does not contribute to the semantic interpretation of the sentence it appears in. RRG, too, postulates that in adjective/copula combinations or nuclear junctures (NJ) the predicating role is fulfilled by the adjective and not the adjective/copula combination. Therefore, in RRG this construction is not viewed as a nuclear juncture or complex predicate since the adjective in these forms is the only predicating element. In other words, the copula appears in the construction for the nucleus (NUC) formation without performing a predicating function (Van Valin 2005). That is, the NUC node in the layered structure of the clause is not followed by PRED node, rather the adjective is the element identified by PRED node as presented below (the example (2) is repeated here as (5)).

(5) Ali šad bud.
   Ali glad be-Past.3rd.Sg.
   ‘Ali was glad.’

Figure 1  LSC of the adjective/copula combination in Persian

As clear from the above layered structure of the clause for sentence (4), the predicative adjective šad ‘glad’ is dominated by the PRED node and the copula bud ‘was’ is not identified with PRED, to indicate that it does not have a predicating role and is instead
functioning as a grammatical nucleus (NUC). The logical structure of the sentence is \( \text{be'}(x, [\text{predicate}']) \) with the copula \( \text{bud} \) ‘was’ as \( \text{be'} \), ‘Ali’ as the \( x \), and the adjective \( \text{sad} \) ‘glad’ as \( \text{predicate} \). The copula \( \text{bud} \) is a single-argument stative nucleus in the sentence where the S-intransitivity coincides with its M-intransitivity. Also, on the basis of the thematic relations argued in the previous chapter, we can conclude that the only argument in the above sentence is the \textit{PATIENT} of the whole proposition.

2. Persian Adjectival Light Verbs

Persian adjectival light verb constructions have not received much attention in the literature: most analyses have been confined to a very brief description of adjective/light verb combinations and provide a few examples of these structures (Lambton 1967, Rastorgueva 1964, Tabaian 1979, Ghomeshi & Massam 1994, Dabir-Moghaddam 1997). There are a number of questions which are fundamental to our study and need to be dealt with in a more comprehensive analysis of the adjectival light verb constructions in Persian. These questions can basically be categorized into two. The first involves the nature and type of light verbs capable of combining with adjectives i.e. what kinds of light verbs fit into these constructions. The second question corresponds to the nature and type of the adjectives that can form these structures with light verbs.

The light verbs, in general, and in the constructions presented in the above section as in (3) and (4), in particular, are not as full as heavy/full verbs in terms of semantic interpretation i.e. if the adjective \( \text{sad} \) ‘glad’ is omitted from (3), as an example, as shown in (3’), the sentence will not be fully meaningful. As a matter of fact, in the light verbal/adjectival structures illustrated in the examples (3) and (4) the predicating role is shared between the light verb and the adjective i.e. we have two nuclei, the light verb and the adjective, which are followed by the PRED node in the layered structure of the clause shown in Figures (2) for the example (3) and Figure (3) for the example (4). The reason for (3’) not to be fully meaningful is the fact that the light verb \( \text{sod} \) ‘became’ is not a semantically full lexical predicate thus it is not capable of forming a predicate to complete a proposition. We will argue later in this study that it is not semantically completely empty or bleached, as some Persian analysts, such as Vahedi-Langrudi (1996), have claimed.

The following Figures (illustrating the layered structure of the clause, semantic representation and their linking algorithm for the two examples mentioned before (3) and (4)) are the way these light verbal/adjectival nuclear junctures are analysed and schematized in RRG.

(3’) *Ali …. \text{sod}.
Ali …. became.

Both the adjective and the verb in these constructions (as presented in Figures 2 and 3 above) act as the nucleus or predicate (as the term ‘nuclear juncture’ implies) i.e. in the case of our examples in (3) and (4) the adjective \( \text{sad} \) ‘glad’ along with the light verbal elements \( \text{sod} \) ‘became’ (in (3)) and \( \text{kærd} \) ‘made’ (in (4)) predicates the whole sentence. The point worth paying attention here is that by replacing the light verb \( \text{sod} \) ‘became’ in (3) by the light verb \( \text{kærd} \) ‘made’ in (4) the logical structure of the whole (nuclear) juncture changes completely.
That is in (3) with šod ‘became’ there is one argument or macrorole i.e. ‘Ali’ is the undergoer and the S-intransitivity of the verb is the same as its M-intransitivity. The sentence in (4) with kærd ‘made’, on the other hand, has two macroroles i.e. an actor (Ali) and an undergoer (dust-æš) and there is a causative relationship between the two arguments with the equal number of S-transitivity and M-transitivity arguments.

Figure 2 LSC for adjectival/light verbal (inchoative) nuclear juncture and the linking from semantics to syntax
Fig. 3 LSC for the adjectival/light verbal (causative) nuclear juncture and the semantic representation along with the linking algorithm

Consider the example in (6) for causative light verb kærd ‘made’ in combination with the predicative adjective narahæt ‘annoyed’ along with the following diagram which represents the Layered Structure of the Clause (LSC) (in RRG terms) of this construction:

(6) ali dust-æš-ra narahæt kærd.
    Ali friend-his-DOM annoyed make-past-3rd.Sg.
    ‘Ali annoyed his friend.’
The sentence in (6) is an example of nuclear juncture in which the first nucleus or predicate is an adjective followed by a light verbal element. The whole complex predicate narahæt kærð ‘annoyed or made annoyed’ bears transition aspectual information i.e. the light verb kærð ‘did/made’ (using daer yek saæt ‘in an hour’ expression) has a bounded reading. This is clear from the grammaticality of (6a) below, where the predicate occurs with the point adverbial phrase daer yek saæt ‘in an hour’, compared to the ill-formed and unacceptable (6b) where it occurs with a durative adverbial phrase bæraye yek saæt ‘for an hour’. We can show that it is in particular the preverbal element i.e. the adjective narahæt ‘annoyed’ in (6) that is the determining factor in the telicity of the whole structure by replacing the preverbal element -narahæt ‘annoyed’- with another adjective -negæran ‘worried’- which is represented in (6c), the sentence can be interpreted as atelic or unbounded.

(6a) ali dust-æš-ra daer yek saæt na rahæt kærð.  
‘Ali annoyed his friend in an hour.’

(6b) *ali dust-æš-ra bæraye yek saæt narahæt kærð.  
Ali friend-his-DOM for an hour annoyed make-past-3rd.Sg.  
‘Ali annoyed his friend for an hour.’

(6c) ali dust-æš-ra bæraye yek saæt negæran kærð.  
Ali friend-his-DOM for an hour worried make-Past-3rd.Sg.  
‘Ali made his friend worried for an hour.’
A fundamental characteristic of these complex predicates with light verbs is that semantic load of the predicate is carried by the preverbal adjective narahæt ‘annoyed’ in (6a) and (6c). In order to determine the role of the light verb in the above nuclear junctures we replace the verbal element kærd ‘did/made’ with the inchoative counterpart šod ‘became’ as shown in (6d) below. We can also add the expression dær yek saæt ‘in an hour’ to test whether there would be a change in the transition telicity of the nuclear juncture of (6a) i.e. whether the change of the verbal element from kærd ‘did/made’ in (6a) to šod ‘became’ in (6d) has any effect on the bounded/unbounded reading of the construction.

(6d) dust-e ali dær yek saæt narahæt šod.
friend-Ez Ali in an hour annoyed become-Past.3rd.Sg.
‘Ali’s friend became annoyed in an hour.’

As clear from (6d) above, there is no change in the telicity interpretation of the nuclear juncture i.e. the sentence in (6d) is quite well-formed and grammatical with the expression dær yek saæt ‘in an hour’. Contrary to Megerdoomian’s (2001) claim, it is not always the light verb which contributes the aspectual information to the light verb construction and as is observed in the nuclear junctures in (6a) and (6d) the light verbal construction naraæt šod ‘became annoyed’ in (6d) has a telic interpretation like the construction in (6a) which implies that the change of the light verb had no effect on the transition/initiatory reading of the junctures. We can note though that the change in the light verbal element from kærd ‘did/made’ to šod ‘became’ does affect the argument structure of the complex predicate. The nuclear junctures in (6a) is a transitive/causative construction while (6d) has an unaccusative/inchoative predicate status. This supports Megerdoomian’s (2001) claim that the light verb denotes its valency in the complex predicate construction.

Another important point regarding the adjectival/light verbal constructions is the fact that there is no agreement on adjectives. The following examples (6e-6g) which are different forms of the same sentence in (6) illustrate this characteristic of adjectives in Persian.

(6e) ali dust-an-æš-ra narahæt kærd.
Ali friends-Pl-his-DOM annoyed make-Past.3rd.Sg.
‘Ali annoyed his friends.’

(6f) ali beradaer-æš-ra narahæt kærd.
Ali brother-his-DOM annoyed make-Past.3rd.Sg.
‘Ali annoyed his brother.’

(6g) ali xahær-æš-ra narahæt kærd.
Ali sister-his-DOM annoyed make-Past.3rd.Sg.
‘Ali annoyed his sister.’

In (6e), the word dust ‘friend’ has been replaced with the plural form dustan ‘friends’ in order to determine if there is any type of gender agreement between the adjective narahæt ‘annoyed’ and the noun dust ‘friend’ in (6), this nominal element has been replaced with beradaer ‘brother’ in (6f) and xahær ‘sister’ in (6g). Again, no gender agreement is observed between the nominal and adjectival elements i.e. for both male beradaer ‘brother’ in (6f) and female xahær ‘sister’ in (6g) words, the adjective narahæt ‘annoyed’ is the same.
Unlike the light verbs *kærdæn* ‘to do/make’ and *šodaen* ‘to become’ discussed above, the copula verb *budæn* ‘to be’ when used with adjectives does not affect the transitivity/intransitivity status, does not contribute to the argument structure of the sentence, and has no role in assigning aspectual information. As the following example (7) represents, the copula verb *bud* ‘was’ used with adjective is a stative verb that attributes the adjective *æsæban* ‘angry’ to Ali. While *šod* ‘became’ in (8) indicates an inchoative/unaccusative status for the construction.

(7) Ali *æsæbani* *bud*.
   Ali angry be-Past.3rd.Sg.
   ‘Ali was angry.’

(8) Ali *æsæbani* *šod*.
   Ali angry become-Past.3rd.Sg.
   ‘Ali became angry.’

In (7), *bud* ‘was’ is a copula since it has no predicating role on its own; it actually functions as a linking device between ‘Ali’ and the adjective *æsæbani* ‘angry’ i.e. it attributes the adjective (*æsæbani* ‘angry’) to ‘Ali’. As a matter of fact, the adjective *æsæbani* ‘angry’ is the predicating element of the sentence regarding the distinction Napoli (1989) makes between modifying and predicating adjectives. The copula verb *bud* ‘was’, unlike the light verb *šod* ‘became’in (8), bears no semantic load and is a grammatical word which carries the tense and indicates the person and number. In other words, light verbs contribute to valency but not Aktionsart (aspect) while copulas are not capable of contributing to any of these parameters. This can be tested by dropping the copula from the sentence in (7’) below.

(7’) *Ali *æsæbani* ..... .
   Ali angry ..... .
   ‘Ali ..... angry.’

Even though the copula *bud* ‘was’ is omitted in (7’) (the omission of copula in sentences such as (7’) makes the sentence ungrammatical), there is no difference in substantive meaning of the two sentences in (7) and (7’) i.e. the omission of the copula verb has no effect on the meaning of the sentence. By comparison, the light verb *šod* ‘became’ contributes to the accusative inchoative aspect of the constructions. In other words, it assigns ‘Ali’ an internal argument role indicating that something made ‘Ali’ angry. This, also, suggests that *šodaen* ‘to become’ in Persian is not an auxiliary but a light verb since auxiliaries are not capable of assigning a particular type of argument. It is not a copula either since copulas are semantically empty while light verbs such as *šodaen* ‘to become’ do contribute to the aspectual and event information and are not semantically bleached constituents. Therefore, contrary to Mahootian’s (1997) claim, the verbal element *šod* ‘became’ is not a copula since it is not empty from the semantic point of view; rather it is a light verbal element (Karimi-Doostan 1997, Megerdoomian 2002).

Like *šodaen* ‘to become’, discussed above, the causative light verb *kærdæn* ‘to do/make’, where combined with adjective, cannot be an auxiliary. In (9) below, *kærdæn* ‘to do/make’ assigns an external argument role to ‘Ali’ meaning that ‘Ali’ is the subject of the complex predicate *æsæbani kærd* ‘made angry’ while (contrary to
Dabir-Moghaddam (1997) who refers to kærdæn ‘to make’ combined with adjectives as auxiliary verb) auxiliaries are not capable of this operation i.e. kærdæn cannot be an auxiliary.

(9) ali dust-æš-ra æsæbani kærd.
   Ali friend-his-DOM angry make-Past.3rd.Sg.
   ‘Ali made his friend angry.’

As is clear from the sentence in (9), kærd ‘made’ is a causative verb. This light verb, as mentioned earlier, is capable of assigning an external argument role to ‘Ali’ highlighting him as the subject of the whole sentence. It should be noted that in Persian the use of light verbs is one of a number of strategies to form causative constructions. In fact, kærdaen ‘to do/make’ can be used in both transitive causative (as in (9) where kærdaen means ‘to make’) and intransitive forms (as in (10) below where kærdaen means ‘to do’). The following illustrates the latter form of kærdaen ‘to do’ in Persian. The example in (10) represents the intransitive usage of the verb kærdaen with the meaning of ‘to do’ i.e. ‘the bird does the flying’. But the important point to mention here is that the preverbal constituent in (10) is not an adjective but a noun. In order to examine whether adjectives, too, can be used with the intransitive usage of the light verb kærdaen ‘to do’, the Persian data was investigated. As a result of this examination, it became clear that only one of the eight groups of adjectives mentioned earlier, the VALUE adjectives can be used with the intransitive form of the verb kærdaen with the meaning ‘to do’. The following example (11) shows the intransitive usage of this verb with the ‘value’ adjective ‘bad’.

(10) pærænde pærvaz kærd.
   bird flying do-Past.3rd.Sg.
   ‘The bird flew.’

(11) Ali be dust-æš bæd kærd.
   Ali to friend-his bad do-Past.3rd.Sg.
   ‘Ali did wrong/bad to his friend.’

Unlike (9) in which kærd has the meaning of ‘made’ and acts as an transitive/causative verb, in (11) the light verb kærd means ‘did’ and is an unaccusative intransitive verb, the noun dust ‘friend’ is an oblique argument, and ‘Ali’ is the subject of the sentence. The value adjective ‘bad’ along with the light verb kærd in (11) make an adjectival nuclear juncture or complex predicate which is not a causative construction i.e. kærd means ‘did’ (and not ‘made’) which operates as an intransitive verb rather than a transitive one. So far, we have discussed the two light verbs that can combine with adjectives to form adjectival light verb constructions, namely, kærdaen ‘to make/do’ and şodeen ‘to become’. Now we move to the next section which discusses the types of adjective used in adjectival light verb constructions.

3. Persian Adjectives in Adjectival NJ

At the beginning of the above section, two questions regarding the adjectival/light verbal constructions or NJs were posed. In fact, this section aimed at providing an answer to the first question on the nature and type of the light verbs which are capable of combining with adjective. The focus of the present section is on answering the
second question regarding the nature and type of the adjectives that fit into the 
points out that individual level adjectives do not enter the realm of CP constructions 
with causative light verbal elements because changing an individual’s permanent trait is 
not possible under normal circumstances (Vahedi-Langrudi 1996). However, Vahedi-
Langrudi (1996) claims that such individual level adjectives as aqel ‘wise’ can be 
acceptable in Persian when combined with the unaccusative light verb šodæn ‘to 
become/turn’ as shown in (12) below while not acceptable with the causative light verb
kærdæn ‘to make/do’ as in (13).

(12) aqel šodæn
    wise become
    ‘to become wise’

(13) *aqel kærdæn
    wise make
    ‘to make wise’

(cf. Vahedi-Langrudi 1996, p.10)

In general, adjectives are of three major types i.e. in terms of the number of elements 
involved in adjectival forms they include three groups: simple, compound, and 
participle adjectives. Examples from each of these groups are presented below:

(14) ræftar-e an bačče madær-æš-ra negæran kærd.
    behaviour-Ez that child mother-his/her-DOM worried make-Past.3rd.Sg.
    ‘That child’s behaviour made his/her mother worried.’

(15) ræftar-e an bæčče madær-æš-ra del-negæræn kærd.
    behaviour-Ez that child mother-his/her-DOM heart-worried make-Past.3rd.Sg.
    ‘That child’s behaviour made his/her mother worried.’

(16) ræfta-e an bačče madær-æš-ra aʃoftæ kærd.
    behaviour-Ez that child mother-his/her-DOM agitated make-Past.3rd.Sg.
    ‘That child’s behaviour made his/her mother agitated.’

In (14) above, the adjective negæræn ‘worried’ is a plain adjective which is not derived 
from other classes of words and is a one-word adjective. In (15), on the other hand, the 
adjective del-negæræn ‘Lit.: heart-worried’ is a compound adjective comprising two 
words del ‘heart’ and negæræn ‘worried’. Unlike the adjectives in (14) and (15), the 
adjective aʃoftæ ‘agitated’ in (16) is derived from another word i.e. the verb aʃoftæn ‘to 
make agitated/upset’ in Persian. As a matter of fact, the deverbal adjective aʃoftæ 
‘agitated’ is the past participle of the verb aʃoftæn ‘to upset/make upset or agitated’. All 
the sentences in (14), (15), and (16), as is clear from kærd ‘made’ are 
causative/transitive constructions in which all the adjectives are predicate adjectives 
that is they denote an event or action. The simple, compound, and past participle or 
derived adjectives can also combine with the inchoative/unaccusative light verb šodæn
‘to become’ to form adjectival nuclear junctures. The inchoative/intransitive forms of 
the examples in (14-16) can be illustrated as (14’-16’) below.

In the sentences (14-16, 14’-16’) the light verbs kærdæn ‘to make’ and šodæn ‘to 
become/turn’ represent their capability to make nuclear junctures with all types of 
adjectives mentioned above, namely, simple, compound, and past participle forms. The 
important point to be taken into consideration here regarding the compound adjectives 
exemplified in (15) is that the element with which adjectives is combined with (like
**del-negæran** ‘Lit: heart-worried’ in (15, 15’) can precede or follow it as in ašofte-xater ‘disturb-minded’ given in (17) below.

(14’’) madaer negeran šod.  
mother worried become-Past.3rd.Sg.  
‘The mother became worried.’

(15’’) madaer del-negæræn šod.  
mother heart-worried become-Past.3rd.Sg.  
‘The mother became worried.’

(16’’) madaer ašofte šod.  
mother agitated become-Past.3rd.Sg.  
‘The mother became agitated/upset.’

(17) ræftar-e an bæčče madaer-aš-ra ašofte-xater kærd.  
behaviour-Ez that mother-his/her-DOM disturb-minded made.  
‘That child’s behaviour made his mother disturb-minded/agitated his mother.’

As mentioned before there are eight major categories of adjectives distinguished by Payne (1997, p.63). In Persian, almost all the adjectives of these eight categories can combine with both kærdæn ‘to make/do’ and šodæn ‘to become/turn’. The following examples (kærdæn: 18-25, šodæn: 18’-25’) illustrate adjectival categories of AGE, DIMENSION, VALUE, COLOR, PHYSICAL CHARACTERISTICS, SHAPE, HUMAN PROPERTY, SPEED:

**AGE Adjective:**

(18) an hadese u-ra pir kærd.  
that accident him/her old make-Past.3rd.Sg.  
‘That accident made him/her old.’

(18’’) u be xatere an hadese pir šod.  
He/She to because that accident old become-Past.3rd.Sg.  
‘He became old because of that accident.’

**DIMENSION Adjective:**

(19) Mina qesse-aš-ra kutah kærd.  
Mina story-her-DOM short make-Past.3rd.Sg.  
‘Mina made her story short/shortened her story.’

(19’’) qesse-ye Mina kutah šod.  
story-Ez Mina short become-Past.3rd.Sg.  
‘Mina’s story became short.’

**VALUE Adjective:**

(20) Ali be xod-aš bæd kærd.  
Ali to self-his bad do-Past.3rd.Sg.  
‘Ali did wrong/bad (things) to himself.’

(20’’) netije-ye kar-e Ali bæd šod.  
result-Ez (of) action-Ez Ali bad became-Past.3rd.Sg.  
‘The result of Ali’s action became bad.’

**COLOR Adjective:**

(21) an-ha xane-ešan-ra abi kærd-ænd.  
that-Pl. house-their-DOM blue make.Past.3rd.-Pl.
'They made their house blue.'
(21”) xane ah ha abi šod.
house that-Pl. blue become-Past.3rd.Sg.
‘Their house became blue.’

 PHYSICAL CHARACTERISTICS Adjective:
(22) lebas-ha čæmedan-ra sængin kærd.
clothes-Pl. suitcase-DOM heavy make-Past.3rd.Pl.
‘The clothes made the suitcase heavy.’
(22’) čæmedan sængin šod.
suitcase heavy become-Past.3rd.Sg.
‘The suitcase became heavy.’

SHAPE Adjective:
(23) an-ha mæsir-e mosabeqe-ye do-ra gerd kærd-ænd.
that-Pl. route-Ez race-Ez running-DOM round make-Past.3rd.-Pl.
‘They made the route of the running race round.’
(23’) mæsir-e mosabeqe-ye do gerd šod.
route-Ez race-Ez running round become-Past.3rd.Pl.
‘The route of the running race became round.’

HUMAN PROPERTY Adjective:
(24) nomre-ye xub-æš daer emtehan u-ra xošhal kærd.
mark-Ez good-his/her in exam him/her happy make-Past.3rd.Sg.
‘His/Her good mark in the exam made him/her happy.’
(24’) u xošhal šod.
He/She happy become-Past.3rd.Sg.
‘He/She became happy.’

SPEED Adjective:
(25) dočærxe sævar soræt-æš-ra tond kærd.
bicycle rider speed-his/her-DOM quick/fast make-Past.3rd.Sg.
‘The cyclist made his speed fast/accelerated.’
(25’) soræt-e dočærxe sævar tond šod.
speed-Ez bicycle rider quick/fast become-Past.3rd.Sg.
‘The speed of the cyclist became fast.’

As is clear from the examples, all the sentences with the light verb kærdæn ‘to make/do’ in (18-25) do have equivalent forms with the light verb šodæn ‘to become/turn’ in (18’-25’) i.e. all the causative/transitive sentences with kærdæn ‘to make/do’ have inchoative/unaccusative/intransitive forms with šodæn ‘to become/turn’. In the meantime, all the adjectives in the eight mentioned categories can combine with the two light verbs (kærdæn and šodæn) to form nuclear junctures. The light verb kærdæn, as mentioned before, has two meanings: ‘to make’ and ‘to do’. The important point worth mentioning here is that the only group of adjectives in which this light verb (kærdæn) can appear with the second meaning i.e. ‘to do’ along with the first meaning ‘to make’ is the VALUE adjectives. The light verb kærdæn has only the meaning of ‘to make’ when accompanied by other seven adjectival forms.
Along with the forms and types of the adjectives discussed above, the amount of the semantic load contributed by the adjectival elements is of crucial importance. Although, as mentioned before, the light verbs are not semantically bleached elements and contribute to the argument structure, transitivity, and aspectual information, the main semantic load is carried by the adjective. Consider the following examples:

(26) pedær-æš xæste šod.
   father-his tired become-Past.3rd.Sg.
   ‘His father became tired.’
(27) kar-e ziyad pedær-æš-ra xæste kærd.
   work-Ez much father-his-DOM tired make-Past.3rd.Sg.
   ‘Overwork made his father tired.’

The matrix semantic load of the two nuclear juncture, xæste šod ‘became tired’ in (26) and xæste kærd ‘made tired’ in (27), which is indeed ‘the tiredness of the father’ is the same even though the light verbs (šod ‘became’ and kærd ‘made’) used in the sentences are different.

4. Discussion

The findings of the adjectival NJs examination are presented in Table (1) below. In this Table the aspect types of all the adjectival/light verbal nuclear junctures along with their logical structures are presented. The basic verb classes of these NJs have been divided into activity, achievement and accomplishment based on the five diagnostic tests (Test 1: the use of the progressive expression 'in process of', Test 2: the use of the adverb 'actively', Test 3: the use of the adverbs 'quickly', or 'slowly', Test 4: the use of the expression 'for an hour', and Test 5: the use of the expression 'in an hour', originally proposed by Vendler (1967) and Dowty (1979)). RRG takes these five tests as the starting points in developing verb classes.

As is clear from the Table, no stative adjectival LVCs have been found in the Persian examples i.e. there is no state verb in our collected data which combines with the adjective (of any type) to form an adjectival LVC. This may be in part due to the fact that among all the Persian light verbs only two i.e. kærdæn ‘make/do’ and šodæn ‘become’ can combine with the adjectives and in part due to the inherent nature of the combination of these light verbs and the predicative adjectives, which may not corresponds to the state of affairs. With regard to other types of the basic three aspect types i.e. activity, achievement and accomplishment, it is observed that the majority of the adjectival nuclear junctures in Persian are of the accomplishment class and the achievement and activity predicates are placed in second and third respectively. In addition, the change in the light verbal element of the adjectival NJs (from kærdæn 'make/do' to šodæn 'become') makes no difference to the aspect type of the whole juncture i.e. the aspectual properties of the whole juncture is not predictable from that of the verbal element.
The important point that arises from the Table 1 is that even though the behaviour of the LV *kærdæn* ‘make/do’ is compatible with that of *šodæn* ‘become’ (i.e. whatever the verb class of the former, the same is true for the latter), they are different in terms of the number of their arguments. Unlike *kærdæn* (which takes two arguments), the LV *šodæn* is univalent in all the adjectival nuclear junctures taking one argument (x) and they are all intransitive. With regard to the contribution of the preverbal/verbal elements in determining the aspectual properties of the whole juncture it should be noted that even though the LV *kærdæn* ‘make’ is an activity predicate when used as a full-heavy verb,
only one LVC (tond kærd 'made quick') belongs to the Activity aspect type and the other seven LVCs (out of the eight adjectival NJs with kærdaen) belong to either achievement or accomplishment. That is, the aspect type of these LVCs is not predictable from that of the verbal element with the exception of one case. In terms of the other eight LVCs which are formed with the LV šodæn 'become' it should be pointed out that this verbal element has no independent aspect type since it has no full-heavy verb form and; therefore, we cannot predict the aspect type of the whole NJ from that of the verbal element. In the following section we scrutinize the event structure of the adjectival LVCs and the contribution of the two constituents.

5. Event Structure of Adjectival NJs

From the analysis of the adjectival nuclear junctures we found out that the light verbs in these LVCs belong to the phase class of verbs i.e. kærdaen 'make/do' referring to the process and šodæn 'become' denoting the result or endpoint of an event can combine with adjective to form nuclear junctures. This is presented in Table (2) below where the LV kærdaen means 'make/do' in adjectival NJs unlike the nominal LVCs where this verb means 'do'.

<table>
<thead>
<tr>
<th>Light Verb</th>
<th>LVs' Phase Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>šodæn 'become'</td>
<td>Result</td>
</tr>
<tr>
<td>kærdaen 'make/do'</td>
<td>Process</td>
</tr>
</tbody>
</table>

Table (2) Features of LVs as phase verbs in Persian adjectival NJs

To use the Engerer's (2007) terminology the two phase verbs (kærdaen 'make/do' & šodæn 'become') refer to the continuative and result (resultative) phases respectively shown in Figure (5.6) below (which is the same as Figure (4.5) in chapter 4).

Figure 5 Phases of an event

The combination of the continuative phase verb kærdaen 'make/do' (both meanings of this verb show the process of the 'doing' or 'making' event) and the result phase verb šodæn 'become' with different adjective types as demonstrated in the following Table (3) yields interesting results. As clear from Table (3), the adjectival NJs are of two types: resultative and non-resultative. That is, the adjectival LVCs formed with the two phase verbs, namely, kærdaen 'make/do' and šodæn 'become' with the adjective types of age, dimension, colour, shape, and speed belong to the resultative constructions while fusion of the same phase verbs with the value, physical characteristic, and human property adjectives (which appear in bold form in Table (3)) yield non-resultative constructions. In other words, even though the phase verbs in both groups are the same the use of different adjective types has yielded different results. That is, in the resultative constructions the age, dimension, colour, shape, and speed adjectives belong to the SCALAR adjective types involving a process. Resultative constructions, as Saeed (2003) points out, involve the process and our focus of attention is the final point of completion in this process. On the contrary, in the non-resultative adjectival LVCs the
value, physical characteristics, and human property adjectives are of STATE/ATTRIBUTE type i.e. these adjectives do not involve a process of event and; therefore, cannot be resultative by nature. As clear from Table (3), this is also applicable to the adjectival NJ with the value adjective although in this construction the meaning of the verbal element *kærdæn*, unlike other LVCs with other adjective types, is 'do', which supports the important role of the adjective type in this respect. That is, the inherent nature of these two adjective types as scalar and state/attributes has caused these adjectival nuclear junctures to behave differently and belong to either resultative or non-resultative event type.

<table>
<thead>
<tr>
<th>Adj.Type</th>
<th>NJ</th>
<th>Event Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>pir kærd 'made old'</td>
<td>Age adj. + 'make' → Resultative</td>
</tr>
<tr>
<td></td>
<td>pir šod 'became old'</td>
<td>Age adj. + 'become' → Resultative</td>
</tr>
<tr>
<td>Dimension</td>
<td>kutah kærd 'made short'</td>
<td>Dim. adj. + 'make' → Resultative</td>
</tr>
<tr>
<td></td>
<td>kutah šod 'became short'</td>
<td>Dim. adj. + 'become' → Resultative</td>
</tr>
<tr>
<td>Value</td>
<td>bæd kærd 'did wrong/bad'</td>
<td>Val. adj. + 'do' → Non-resultative</td>
</tr>
<tr>
<td></td>
<td>bæd šod 'became bad'</td>
<td>Val. adj. + 'become' → Non-resultative</td>
</tr>
<tr>
<td>Colour</td>
<td>abi kærd 'made blue'</td>
<td>Col. adj. + 'make' → Resultative</td>
</tr>
<tr>
<td></td>
<td>abi šod 'became blue'</td>
<td>Col. adj. + 'become' → Resultative</td>
</tr>
<tr>
<td>Physical</td>
<td>sengin kærd 'made heavy'</td>
<td>Ph./ch. adj. + 'make' → Non-resultative</td>
</tr>
<tr>
<td>Character.</td>
<td>sengin šod 'became heavy'</td>
<td>Ph./ch. adj. + 'become' → Non-resultative</td>
</tr>
<tr>
<td>Shape</td>
<td>gerd kærd 'round made'</td>
<td>Sh. adj. + 'make' → Resultative</td>
</tr>
<tr>
<td></td>
<td>gerd šod 'became round'</td>
<td>Sh. adj. + 'become' → Resultative</td>
</tr>
<tr>
<td>Human Property</td>
<td>xošhal kærd 'made happy'</td>
<td>Hu./Pr. adj. + 'make' → Non-resultative</td>
</tr>
<tr>
<td></td>
<td>xošhal šod 'became happy'</td>
<td>Hu./Pr. adj. + 'become' → Non-resultative</td>
</tr>
<tr>
<td>Speed</td>
<td>tond kærd 'made quick'</td>
<td>Sp. adj. + 'make' → Resultative</td>
</tr>
<tr>
<td></td>
<td>tond šod 'became quick'</td>
<td>Sp. adj. + 'become' → Resultative</td>
</tr>
</tbody>
</table>

Table (3) Event type of the adjectival NJs in Persian

As a matter of fact, Table (1) is further evidence for this phenomenon and is consistent with what we have demonstrated in Table (3) above. The findings of the application of the five diagnostic tests in Table (1) show that the three NJs with the value, physical characteristic, and human property adjective types are the only ill-formed constructions with the first test (the use of the progressive expression 'in process of'), the third (the use of the adverbs 'quickly', or 'slowly'), and the fifth test (the use of the expression 'in an hour'). That is, unlike other LVCs presented in this Table, the result of these three tests is 'no'. This indicates that these three constructions do not involve a process of event and consequently cannot be resultative. As mentioned above, this can also be observed in Table (1) where these constructions are the only adjectival NJs which belong to the achievement verb class with the logical structure [INGR predicate’ (x)] CAUSE [INGR predicatedative adjective (x, y)]. That is, achievement constructions are instantaneous, do not take place in a time span, and do not belong to the resultative event type i.e. they have the feature of [+punctual] indicating that they lack internal duration. The [+punctual] feature of achievement LVCs distinguishes them from the other adjectival nuclear junctures with activity and accomplishment aspect types which have [-punctual] feature and involve temporal duration and therefore are of resultative event type. Consider for instance *pir kærd* 'make old' in (18) repeated here as (28) with the age adjective *pir* 'old' and *bæd kærd* 'did wrong/bad (things)' in (20) repeated here as (29) with the value adjective *bæd* 'bad':

(28) an hadeše u-ra pir kærd.

That accident him/her old make-Past.3rd.Sg

‘That accident made him/her old.’
(29) Ali be xod-æ̞š bæd kærd.
    Ali to self-his bad do-Past.3rd.Sg.
    ‘Ali did wrong/bad (things) to himself.’

The adjectival NJ pir kærd 'made old' in (28) with the age adjective pir 'old' is an accomplishment construction with [-punctual] feature where the event 'making old' has internal duration i.e. it takes place over a period of time (in real situations nobody gets old all of a sudden) bearing a resultative event type. On the contrary, the adjectival NJ bæd kærd 'did bad/wrong (things)' in (29) with the value adjective bæd 'bad' is an achievement construction with [+punctual] feature where the event 'doing bad' is instantaneous and does not happen over a time span i.e. somebody does something wrong in a particular point of time. Our discussion in this section indicates that the adjectival element in the adjectival nuclear junctures contributes to the result event type or attribute and makes these constructions behave as resultative. In addition, the inchoative and causative light verbs in these constructions belong to the phase class of verbs. The change in the LV has no effect on the event type of the adjectival LVCs. In other words, the light verbs are bleached with regard to event type demonstrated in Figure (5) in this section. This is consistent with their behaviour in the nominal NJs where the major role in providing the event type is played by the pre-verbal element and LVs contribute to the phase of event carrying TAM and operator features. Having examined the event structure of the adjectival LVCs in this section, we now move on to explore the capability of these elements in assigning argument structure in more detail.

6. Argument Structure

We have categorized the discussion into two parts: the first part (section (6.1)) analyzes the syntactic valency or transitivity of the adjectival NJs and the second (section (6.2)) focuses on their semantic valency or thematic roles.

6.1 Syntactic Valency

As the logical structures of the two LVs (kærdæn 'make/do' and šoden 'become') presented in Table (1) indicate, in all verb classes and all adjective types the light verb kærdæn 'make/do' is used transitively having (y) features. In fact, the transitivity status of the whole adjectival nuclear juncture (with kærdæn 'make/do') is matched with that of the full/heavy form of the verbal element. For the inchoative light verb šoden 'become' one argument or macrorole feature has been presented as (x) showing the intransitive reading of this predicate. As schematized in the logical structures of the adjectival NJs with the light verb kærdæn 'make/do', all of the examples with this verbal element are provided with causative features that is the logical structures of activity, achievement, and accomplishment predicates with this light verb are all presented as [….] CAUSE [do …], [INGR …], or [BECOME …]. In other words, regardless of the aspect type of the predicates, all the adjectival LVCs examined in this chapter belong to the causative class presenting the causative nature of the light verb kærdæn 'make/do' in the adjectival NJs. This indicates that the verbal element (either kærdæn 'make/do' or šoden 'become') in these constructions plays a more important role in determining the transitivity/ causativity status of the whole juncture and the adjective's role is not as influential as that of the light verb. This is contrary to what is claimed by Karimi-Doostan (1997, 2005) who maintains that light verbs are not capable
of determining the number of arguments in light verbal constructions. In fact, the problem with the previous studies of the Persian LVCs including Karimi-Doostan's analysis is that there has been no categorization of these constructions based on the specific type of the preverbal element. While in this study we have shown that the degree of the contribution of the two elements to the argument structure corresponds to the type of the preverbal element used in these nuclear junctures. As discussed above, in the adjectival NJs, for instance, the role of the light verb outweighs that of the non-verbal (adjectival) element with regard to the argument structure while the majority of the examples used by Karimi-Doostan belong to the nominal LVCs where the noun in these constructions plays a more important role in the argument structure. This has caused the above mentioned analyses to make such a claim regarding the complete bleaching of the light verbs. In order to examine the impact of the adjectival/light verbal elements in characterizing the semantic valency or thematic roles of the whole construction this issue is explored in the following section.

6.2 Semantic Valency or Thematic Roles

As discussed above, in adjectival LVCs the syntactic valency or the transitivity status of the whole construction is in direct correspondence with the (in)transitivity reading of light verb. To determine the amount of the LV contribution to the semantic valency of these constructions consider the adjectival LVCs kutah kærdæn 'make short' and kutah šodæn 'become short' with the dimension adjective kutah 'short' used in examples (19) and (19΄) and repeated here as (30) and (30΄) respectively:

(30) Mina qesse-æš-ra kutah kærđ.
Mina story-her-DOM short make-Past.3rd.Sg.
‘Mina made her story short/shortened her story.’

(30΄) qesse-ye Mina kutah šod.
story-Ez Mina short become-Past.3rd.Sg.
‘Mina’s story became short.’

As clear from the above sentences, the privileged syntactic argument Mina is the agent and qesse 'story' is the patient of the sentence in (30) with two macroroles or arguments (x, y) as the logical structure of [BECOME kutah kærd (x)] CAUSE [BECOME kutah šodæn (x, y)] presents. On the contrary, the replacement of the LV kærd 'made' in (30) with the inchoative LV šod 'became' (the infinitive form is šodæn 'become') makes the sentence in (30΄) monovalent with qesse 'story' as the patient of the sentence. The behaviour of kærdæn 'make' with the dimension adjective kutah 'short' in (30) above is consistent in all the adjectival NJs where this light verb has been used with different adjective types (age, dimension, value, colour, physical characteristics, shape, human property, and speed). That is, in all the adjectival LVCs explored in this study kærdæn is capable of assigning the same types of thematic roles to the sentence arguments with the privileged syntactic argument as the agent and the second argument or the direct core argument as the patient. The important point is that this is consistent with the heavy form of kærdæn 'make' where it assigns the same thematic roles to its (x) and (y) arguments. The same compatibility is observed between the above example in (30΄) with the logical structure BECOME kutah šodæn (x) and all the sentences with the LV šodæn 'become' and different types of adjective mentioned earlier. In other words, in all the adjectival NJs analyzed in this study šodæn is used with one patient macrorole or argument as the only thematic role assigned by this light verb. In the next section we
will demonstrate a schematic representation of the features of the adjectival nuclear junctures examined in this chapter.

7. Constructional Schemas of Adjectival NJs

In order to determine the nexus-juncture type of the adjectival NJs in this section we have used the negation nuclear operator as the sharing operator between the two structurally independent elements in these constructions. To illustrate this phenomenon consider the example in (19) with the dimension adjective kutah 'short' repeated here as (31) with the Persian nuclear negation operator næ-. Figure (6) below schematizes the structural independence of the two PRED nodes which share this operator i.e. the negation operator has scope over both elements. It should be noted here that the same phenomenon regarding the nuclear negation operator sharing between the two constituents takes place in all the adjectival LVCs with different adjective type and the two causative (kaerdæn 'make') and inchoative (sodæn 'become') light verbs. That is, both construction types belong to the nuclear co-subordination linkage form.

Figure 6 Operator sharing in Persian adjectival NJs

(31) Mina quesse-aes-ra kutah næ-kær.  
‘Mina did not make her story short/shortened her story.’

To summarize the representation of the syntactic, morphological, semantic, and pragmatic features along with the nexus-juncture linkage type of these constructions, a constructional schema is presented below for each of the two groups of Persian adjectival nuclear junctures.
8. Conclusion

This paper has been devoted to the analysis of Persian adjectival light verb constructions, or in RRG’s terms, nuclear junctures. We have tried to provide a comprehensive analysis of the adjectival nuclear junctures, which have not received much attention in literature. Unlike such studies of light verb constructions as Karimi-Doostan (1997), the present investigation of adjectival LVCs provides a detailed
examination of the type and nature of the two constituents and their contribution to the event and argument structure and the aspect type of the whole juncture. The findings of the present chapter have revealed that only the causative and the inchoative light verbs (*kaerdæn* 'make/do' & *šodæn* 'become' respectively) can fuse with adjective to form nuclear junctures which act as a single unit. The light verbs in these constructions belong to the phase class of verbs referring to a particular phase of an event and are bleached with regard to the event type or attributes. In fact, the preverbal or adjectival elements which can be of age, dimension, colour, shape and speed contribute to the event structure and cause these constructions to be resultative i.e. they belong to the result phase of an event. The only adjectival NJs that are not resultative are those formed with the value, physical characteristic, and human property adjective types, which are due to the inherent nature of these adjectives that do not involve a process and cannot be resultative. The causative and inchoative adjectival LVCs can be of activity, achievement, and accomplishment verb class, where the two nuclei in these constructions act as a unified element. In sum, these constructions have the nexus-juncture linkage of nuclear co-subordination. In addition, in both constructions the preverbal element has the leading role in the aspect type of the whole nuclear juncture and the verb class of the LVC is predictable from that of the verb in just a few cases and in majority of the constructions it is the preverbal element which is more important. On the contrary, the transitivity of all the adjectival NJs is predictable from that of the verbal element.

**References**